Italian Botanist 17: 103–107 (2024)
doi: 10.3897/italianbotanist.17.119069
https://italianbotanist.pensoft.net

SHORT COMMUNICATION

Italian Botanist
Published by Società Botanica Italiana

Typification of the name *Sempervivum dolomiticum* Facchini (Crassulaceae)

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Academic editor: Lorenzo Peruzzi | Received 18 January 2024 | Accepted 7 March 2024 | Published 10 July 2024

Citation: Canella M, Ranjbaran Y, Behrens E, Bonomi C, Orsenigo S, Dal Grande F (2024) Typification of the name *Sempervivum dolomiticum* Facchini (Crassulaceae). Italian Botanist 17: 103–107. https://doi.org/10.3897/italianbotanist.17.119069

Abstract

The designation of type material is a crucial step in taxonomy. It enables the establishment of a strong morphological reference for plant species description and identification. In the current work, we investigated the MUSE-preserved collections to trace back the original study material employed by Francesco Facchini to describe *Sempervivum dolomiticum* Facchini. This chasmophyte is an Italian endemic occurring in the eastern Dolomites. A lectotype and an isotype have been designated.

Keywords

Alpine flora, chasmophytes, Dolomites, herbaria

Introduction

Sempervivum dolomiticum Facchini (Facchini 1855) is an alpine chasmophytic species endemic to Italy. Its distribution is limited to the administrative regions of Veneto and Trentino-Alto Adige/Süd Tirol (Bartolucci et al. 2018; Argenti et al. 2019; Pignatti et al. 2019). A nomenclatural study of *S. dolomiticum* (Crassulaceae) revealed that this name has not yet been typified (Peruzzi et al. 2015). Our contribution has the

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aim to identify the type material of *S. dolomiticum* and is part of ongoing research on the names of vascular plants described for the Italian Alps (e.g. Orsenigo and Galasso 2019; Orsenigo et al. 2019).

Materials and methods

This study is based on the examination of relevant literature and on a survey of the original material in the herbarium of the Italian botanist Francesco Facchini (1788–1852). The *exsiccata* are currently stored at the MUSE herbarium (TR, MUSE – Museo delle Scienze, Thiers B. 2018 onwards) in the "Ambrosi-Facchini" and "Gelmi" collections (Pedrotti and Tisi 1993; Festi and Prosser 2008). The protologue of *S. dolomiticum* (Facchini, 1855) has been meticulously scrutinized and compared with Facchini's collected material. The designation of type material has been done according to McNeill (2014) and Turland et al. (2018). Moreover, current presence of the species in its *locus classicus* was confirmed through a field survey conducted in the summer of 2019.

Typification of the name

Sempervivum dolomiticum **Facchini, Z. Ferdinandeums Tirol 5(3): 56(–57). 1855.**

Type. Italy. "*Sempervivum* (1843/9/23) Sas della Porta. In tre pendici fino alla sommità, meno 5–10 passi. In alto, come gli altri semprevivi fra l'erba per difesa." "NB. Petala lata [?] 5"' longa, 1 1/3 lata reperta, medio striosatura fiore purpurea. Corolla *S. arachnoidei* major, sed quidem forma etiam germina. Squamae ut *S. funkii*, montani, etc..", 23 September 1843, *F. Facchini* (**lectotype designated here:** TR-BOT 002203, image available at https://www.muse.it/home/ricerca-e-collezioni/le-collezioni-scientifiche/catalogo-online-collezioni-muse/#/dettaglio/d01a09a4-d253-4b2d-ba6a-58e5c706c24a).

Ind. Loc. "Sas della Porta. In tre pendici fino alla sommità, meno 5–10 passi". Reg. Trentino–Alto Adige, Prov. Trento. TAA.

Isotype. Italy. "*Sempervivum* (1843/9/23) Alpe del Sas della Porta (Sec. = Kolf.) cum fol. Caulinis superioribus" 23 September 1843, *F. Facchini* TR-BOT 002204, image available at https://www.muse.it/home/ricerca-e-collezioni/le-collezioni-scientifiche/catalogo-online-collezioni-muse/#/dettaglio/db45fec9-a402-4ed5-a5b5-22e839671107).

Note. Code TR-BOT 002203 and TR-BOT 002204 refer to the herbarium vouchers selected as lectotype and isotype. However, the TR herbarium provides a code for each handwritten original note attached to the voucher. In particular, the Gelmi and Ambrosi-Facchini collections are study herbaria, and often the notes have been added on multiple occasions. As a consequence, a single voucher may be registered with more than one code. This is the case of isotype TR-BOT 002204, which has an additional note (marked TR-BOT 002205, visible at the provided link).

Nomenclatural notes. In the original description of *S. dolomiticum*, Facchini noted that this species co-occurs with *Sempervivum arachnoideum* L. (1753: 465) ("*[…] germina angustiora S. aracnoidei*"), specifically noting the absence of apical trichomes in the rosette. Additionally, among the diagnostic characteristics, Facchini identified: leaves with marginal hairs, purple petals, linear-lanceolate leaves, and lanceolate petals (see Fig. 1). We could trace seven specimens of *S. dolomiticum* in the TR collections. Amongst these, five were collected by Facchini himself while two were collected by Enrico Gelmi (Table 1). The sampling locations of two specimens collected by Facchini (TR-BOT002203 and TR-BOT002204) match with the protologue: "*[…] in Alpe Seekoff*", corresponding to the locality Croda del Becco, a mountainous part of the complex of Croda Rossa, bordering Veneto and Trentino Alto Adige. Between the two sheets, the lectotype has been chosen based on the conservation status of the sample and the quality of the notes: voucher TR-BOT002203 was chosen as lectotype and voucher TR-BOT002204 as isotype. Notes on these vouchers report the same date and location and the plant material is probably part of a single gathering. The quality of the

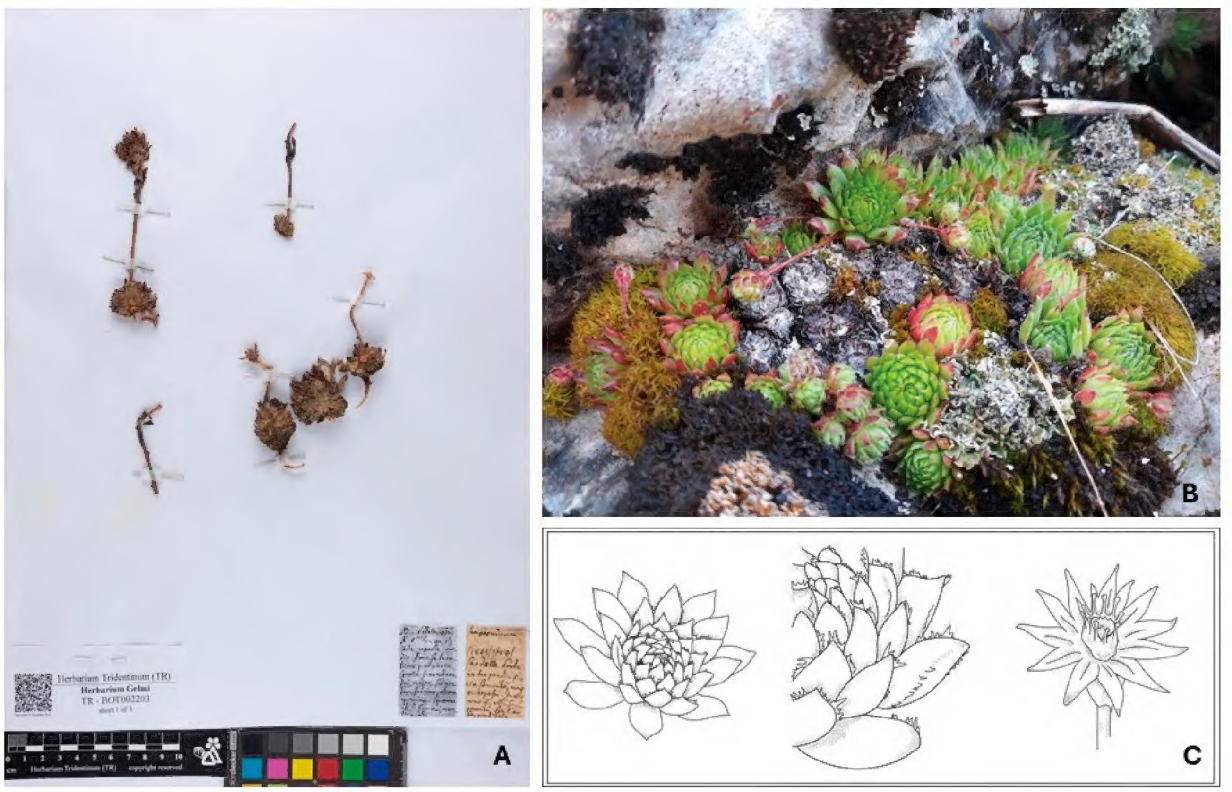

Figure 1. Photograph of the lectotype of the name *Sempervivum dolomiticum* Facchini, TR-BOT002203 (**A**); photograph of the plant in its natural habitat at the type locality Croda del Becco (*locus classicus*) (**B**), drawing based on living topotypical material, summarizing the main diagnostic characters: rosette with no apical hairs, linear-lanceolate leaves with marginal hairs, lanceolate petals (**C**).

Table 1. List of *exsiccata* belonging to "Ambrosi-Facchini" and "Gelmi" collections considered in this study.

Specimen code	Collection name	Sampling locality	Sampling date	Collector
TR-BOT002200	Gelmi	Fiemme, San Pellegrino, Trentino	31 July 1892	Enrico Gelmi
TR-BOT002201	Gelmi	Cirelle, Trento	10 October 1846	Enrico Gelmi
TR-BOT002203	Gelmi	Sas della Porta, Bolzano	23 September1843	Francesco Facchini
TR-BOT002204	Gelmi	Alpe del Sas della Porta, Bolzano	23 September 1843	Francesco Facchini
TR-BOT002206	Gelmi	Not specified	Not specified	Francesco Facchini
TR-BOT002208	Gelmi	Trento	29 June 1848	Francesco Facchini
TR-BOT050525	Ambrosi-Facchini	Soraga, Soraga di Fassa, Trentino	23, 24 July 1850	Francesco Facchini

specimens is low in all the herbarium vouchers considered in this study, probably due to difficulties in desiccating and preserving succulent plant tissues. Nevertheless, we can evaluate the selected types as fully compliant with the species description.

Acknowledgements

This research was supported by the Italian Ministry of University and Research (project funded by theEuropean Union - Next Generation EU: "PNRR Missione 4 Componente 2, "Dalla ricerca all'impresa investimento 1.4, Progetto CN00000033").

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